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REPORT NUMBER 84-1595

TITLE ANALYSIS OF THE SIX DAY WAR, JUNE 1967

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Submitted to the faculty in partial fulfillment of requirements for graduation.

AIR COMMAND AND STAFF COLLEGE
AIR UNIVERSITY
MAXWELL AFB, AL 36112

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE

READ INSTRUCTIONS BEFORE COMPLETING FORM

1. REPORT NUMBER
84-1595

2. GOVT ACCESSION NO.

3. RECIPIENT'S CATALOG NUMBER

4. TITLE (and Subtitle)
ANALYSIS OF THE SIX DAY WAR, JUNE 1967

5. TYPE OF REPORT & PERIOD COVERED

6. PERFORMING ORG. REPORT NUMBER

7. AUTHOR(s)
CHARLES B. LONG, MAJOR, USAF, 29 JUL 1946

8. CONTRACT OR GRANT NUMBER(s)

9. PERFORMING ORGANIZATION NAME AND ADDRESS
ACSC/EDCC, MAXWELL AFB AL 36112

10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS

11. CONTROLLING OFFICE NAME AND ADDRESS
ACSC/EDCC, MAXWELL AFB AL 36112

12. REPORT DATE
APRIL 1984

13. NUMBER OF PAGES
68

14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office)

15. SECURITY CLASS. (of this report)
UNCLASSIFIED

15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

STATEMENT "A"
Approved for public release;
Distribution is unlimited.

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES
Contains copyrighted material

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Examines the Six Day War, the Arab-Israeli conflict of June 1967, for the purposes of highlighting applications/violations of the principles of war listed in AFM 1-1. Reviews the background of the Arab-Israeli problem and some major events leading up to the war. Provides a battle synopsis of the conflict including visual depictions of the battle progress. Analyzes the application/violation of the principles of war by each side--Israeli and Arab. Provides some discussion questions in a guided discussion format for possible use in a seminar environment.

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PREFACE

This paper examines the Six Day War, the Arab-Israeli conflict of 1967, for the purposes of highlighting applications/violations of the principles of war outlined in AFM 1-1. This material will be incorporated into an ACSC block of instruction studying the principles of war as used in famous historical battles. This paper is divided into three separate sections. The first section reviews the background of the Arab-Israeli problem and highlights some of the major events leading up to the war. This section also presents a battle synopsis of the conflict including visual depictions of the battle progress. The second section provides an analysis of the use (or misuse) of the principles of war by each side--Arab and Israeli. The final section provides some discussion questions, with supporting rationale, in a guided discussion format for possible use in a seminar environment. The non-standard format for this project is at the request of ACSC/BDCJ to assist in building this particular block of instruction.

ABOUT THE AUTHOR

Major Charles B. Long graduated from the University of South Carolina in 1968 with a Bachelor of Science in Economics and was also a distinguished graduate of the Air Force ROTC program. Major Long then received his Master's of Business Administration (MBA) from the University of South Carolina in 1969 through an Air Force Institute of Technology sponsored educational delay program.

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GLOSSARY

AAA	Antiaircraft Artillery
AFM	Air Force Manual
APC	Armored Personnel Carrier
EAF	Egyptian Air Force
Fedayeen	Arab Commando
IAF	Israeli Air Force
SAM	Surface-to-air Missile
UN	United Nations
UNEF	United Nations Emergency Force

Chapter One

THE WAR

BACKGROUND AND ESCALATION

> The Promised Land. Promised to whom?
> The Jew, who came first? Or the Arab, who was there last?
> These cousins of the Semitic peoples would say, the both,
> that the land is the pledge of their God. But which God: Jehovah
> or Allah? What God hath joined together, let no man put asunder.
> But man had, this to the Jew, that to the Arab. (1:5)

The Arab-Israeli antagonism is deeply rooted in ancient rival claims to the area of Palestine. (22:321) Although its political boundaries have changed often, Palestine's geographical area has historically been regarded as the area between the Mediterranean Sea and the Jordan River and between Egypt and Syria. During the twenty centuries since the Romans expelled the Jews from Palestine in 135 A.D., the land has been under the successive rule of Byzantines, Arabs, Crusaders, Turks, and Great Britain. Spurred by the Zionist movement and anti-Semitism in Eastern Europe, Jews began to return to Palestine in large numbers during the late 18th and early 19th centuries so that by the time of British occupation in 1918 their numbers totaled about 70,000 compared with 630,000 Arabs. (8:1-2) Throughout World War I Zionist leaders negotiated with the British for a Jewish homeland in Palestine resulting in the Balfour Declaration of 1917 which stated that Britain, ". . . viewed with favor the establishment in Palestine of a national home for the Jewish people. . . ." (4:8) The Arabs' historic claims to Palestine are based on their presence in the country since it first came under Moslem rule in approximately 600 A.D. (8:3)

The antagonism between Jew and Arab began to grow. Following the Balfour Declaration, the steady influx of Jewish immigrants swelled the Jewish population to almost one-third of Palestine's total population by 1937. During World War II, the Arab-Jewish strife remained in abeyance for the most part; however, after the war it flared up with increased violence. In 1947, frustrated by years of trying to keep the peace between Arabs and Jews, Britain announced her intention to relinquish her mandate over Palestine and placed the issue before the United Nations (UN). The resulting UN plan partitioned Palestine into a Jewish and Arab national state with Jerusalem under international administration. (16:2-3) While the Jews approved the plan, the Arab response was adamant opposition as evidenced by the Arab League (a loose confederation of seven Arab states including Egypt, Jordan, and Syria) calling for war against the Jews. (8:6) As the British began to withdraw in the Spring of 1948, the clashes between Arab and Jew became more severe, approaching organized warfare.

At midnight on May 14, 1948, when the British mandate over Palestine officially terminated, the state of Israel was born--a national home for the Jews as envisaged in the Balfour Declaration. A few hours later Israel was simultaneously invaded from the south by Egypt, from the east by Jordan, and from the north by Syria and Lebanon. Their goal was to crush the new Jewish state. Israel repelled the initial invasion, and by mid-1949 had won her "war of independence" gaining more territory than allotted under the UN partition and causing the flight of almost one million Palestine Arab refugees. (16:3-7)

Unreconciled to their defeat and to the existence of Israel, the Arab states began a campaign of harassment against Israel which eventually led to

another war. Israel was subjected to an economic boycott, restricted trade through the Straits of Tiran and the Suez Canal, and frequent attacks by Arab infiltrators on border settlements. Tensions increased as the Israelis refused to allow the Arab refugees to return to their former homes in Israel. Following an upsurge of commando raids into Israel from the Sinai, Israel launched a massive assault against Egypt on October 29, 1956, to eliminate the fedayeen (commando) bases from the Sinai peninsula. When hostilities ceased in November 1956, Israel controlled almost all of the Sinai peninsula, the Gaza Strip, and the Straits of Tiran, and had captured over 6,000 Egyptian prisoners. In 1957, a UN Emergency Force (UNEF) was established in the Sinai to disengage the Egyptian and Israeli troops by serving as a buffer between them and to guarantee Israeli ships passage through the Gulf of Aqaba. (8:7-9)

From 1957-67, Arab-Israeli tensions continued to grow into a prelude for the Six Day War. During this period numerous clashes occurred on Israel-Arab frontiers--Arab terrorists attacking an Israeli target with the predictable Israeli response of even more powerful counter strikes. This crescendo continued making it difficult to pinpoint any one event which triggered the ensuing war, but by May 1967, the sequence of escalation had begun. (13:15-23)

In early May false reports began to circulate that Israel was concentrating her forces on the Syrian border. (10:10) Egypt and Syria responded to these reports by mobilizing their forces and announcing their "combat readiness" on 17 May. The next day, Jordan proclaimed her forces mobilized for battle against the common enemy. (30:10) At the same time Egypt began moving a large force into the Sinai including armour, infantry, and forward

placement of aircraft. On 19 May, the UNEF was officially withdrawn from the Egyptian-Israeli border at Egypt's request, and Radio Cairo called for a holy war to destroy Israel and liberate Palestine. (10:12-16)

Both Israel and Egypt announced the call-up of reservists on 21 May. The pace accelerated as Nasser announced the closure of the Straits of Tiran on 23 May, blockading Israel's port of Eilat and her only outlet to the Red Sea. Israeli Prime Minister Eshkol described the blockade as an "aggressive act against Israel" and called upon the UN and major powers to restore free navigation through the Straits and in the Gulf. (16:15-18) Tension built as Radio Cairo and Nasser speeches called for Arab unity to destroy Israel. The next several days provided increasing evidence of Arab unity against Israel--Sudan, Algeria, and Morocco pledging support to Egypt; Saudi Arabian troops deploying near Aqaba; Kuwaiti troops landing in Egypt; and most importantly, the signing of an Egyptian-Jordanian mutual defense pact on 30 May placing Jordanian forces under Egyptian command. (10:17-18)

As an Egyptian general arrived in Amman to assume command of Jordanian forces, the Israeli government appointed a new Minister of Defense, Moshe Dayan, a popular war hero from 1948 and 1956. (13:34) After Dayan's appointment on 1 June, Israel portrayed external restraint even though the same three conditions were now present as when the 1956 war started: blockade of the Gulf, Arab terrorist raids into Israel, and the threat of a joint Egypt-Syria-Jordan military attack against Israel. (26:304) On 4 June, swift and secret preparations in Israel contrasted with Arab war rhetoric and troop movements. In these last hours Western powers made suggestions for peace which Nasser boldly refused "as it would transgress Egyptian sovereignty." (13:35-36) On this final note the eve of war passed--with the morning came D-Day.

ISRAELI AIR OFFENSIVE

The war actually began Monday morning, 5 June, with a carefully planned, frequently rehearsed, and extraordinarily well coordinated pre-emptive attack by the Israeli Air Force (IAF) on Egyptian airfields and aircraft. (13:49) In fact, the plan of attack was actually conceived four years earlier, in 1963. (3:204) The first wave of 40 aircraft simultaneously struck 10 airfields (4 aircraft per target) at 0745 (0845 Cairo time). The 10 airfields attacked in this strike were: El Arish, Cebel Libni, Bir Gifgafa, and Bir Thamada in the Sinai Desert; Abu Sueir, Kabrit, and Fayid along the Suez Canal; Inchas, Cairo West, and Beni Sueif on the banks of the Nile River. See Figure 1. During this opening attack, by far the greater part of the Egyptian Air Force (EAF) was caught on the ground. The only Egyptian aircraft airborne when the Israeli strike began were four unarmed aircraft on a training flight. (4:78)

The 0745 time-on-target was shrewdly chosen for several reasons. First, the Egyptian state of alert was past its peak since the morning dawn patrols were over and most pilots and ground crews were breakfasting. Secondly, by making the initial strike at 0745 Israeli pilots could sleep until approximately 0400 instead of getting little, if any, sleep which would have been necessary for a dawn raid. Also, at this time of year the heavy morning mist over the Nile and the Delta is lifting by 0730 and completely clear by 0800 with excellent definition because of the sun angle. Finally, striking 15 minutes prior to the start of normal office hours would catch many Egyptian commanders, officers, and key executive and training personnel on their way to work. (13:63)

The primary objective of the first strike was to render the runways unusable and to destroy as many MIG-21 aircraft as possible. The MIG-21 was the only aircraft capable of preventing the IAF from achieving its immediate goal--destruction of Egypt's long-range bomber force which posed a major threat to Israel's population. Eight MIG-21 formations were destroyed while taxiing for takeoff, and 20 more frontline Egyptian fighters (12 MIG-21s and 8 MIG-19s) were either shot down in air-to-air encounters or crashed while trying to land on damaged runways. Apart from these aircraft, only two flights of MIG-21s (four aircraft) got airborne; however, they were able to destroy two Israeli aircraft before being shot down themselves. (18:73-74)

Flying at extremely low altitudes (down to 30 feet) and unseen by Egyptian radar, the first attack wave (10 flights of 4 aircraft) spent approximately 7 to 10 minutes over the target--time for one bombing run and three or four strafing passes. As the first wave of Israeli aircraft struck, the second wave was already on its way, and the third was getting airborne. Three minutes after the first wave had left its targets, the second wave attacked the same bases for seven minutes. Three minutes later the third wave hit. These pulverizing attacks lasted 80 minutes, eight waves in all. There was a 10-minute lull and then another 80 minutes of air strikes. (5:245)

In 170 minutes the IAF had broken the back of the EAF as a fighting force. Altogether 19 Egyptian airfields were struck the first morning--the original 10 and 9 more at Mansura, Helwan, El Minya, Almaza, Luxor, Beversoir, Hurghada, Ras Banas, and Cairo International. (4:85) By 1035, some 300 Egyptian aircraft had been destroyed, including all 30 long-range TU-16 bombers caught on the ground at Beni Sueif and Luxor. (13:66)

The IAF's attention next turned to Syria, Jordan, and Iraq. Shortly before noon, the Syrian Air Force damaged the Israeli oil refinery at Haifa and destroyed several dummy aircraft at the Megiddo airfield. Israel's retaliation included simultaneous attacks on 5 Syrian airfields destroying 60 of her 127 combat aircraft. At this point, Syria withdrew the remainder of her air forces from the battle area. At about the same time (near noon), the Jordanian Air Force bombed near Natania and destroyed an Israeli transport at Kefer Sirkin air base. The Israeli response wiped out the Jordanian Air Force demolishing all 21 of its combat aircraft, heavily damaging the air bases at Amman and Mafraq, and destroying the powerful radar station at Ajlun. (29:10) Finally, at about 1400 hours Iraqi planes raided the Israeli base at Ramat David. Again, the IAF retaliated by striking the Iraqi airfield at H-3 (500 miles across Jordan) and destroying at least 10 Iraqi aircraft on the ground. (5:247)

Having crippled the Iraqi and Syrian air threat and having destroyed Jordan's Air Force, Israel again turned its attention to Egypt. Besides returning to those bases hit during the morning, Israeli pilots also concentrated on Egyptian radar stations demolishing 23 stations altogether including all 16 radars in the Sinai. (29:9) Israeli air raids continued after dusk and into the night hitting runways with delayed action bombs and harassing salvage crews. Runway cratering of Arab airfields had been enhanced all day by the IAF's use of a radical, lightweight bomb called the "concrete dibber." This unique bomb carried retro rockets to kill its forward speed at release and a booster to thrust it deep into the runway. This ordnance permitted accurate delivery at low level (200 feet) and high speeds (.9 Mach). (20:1007)

Israel's air offensive on 5 June had been overwhelming. Her effort had indeed been offensive--leaving only 12 aircraft to defend Israeli home bases (8 airborne and 4 at the end of their runways). (4:82) Not only had surprise worked, but the performance of Israeli air and ground crews was superb as illustrated by the damage inflicted and the unbelievable ground turn-around times of seven and one-half minutes. (31:42) Table 1 shows the first day (5 June) IAF aircraft losses by cause while flying 490 sorties against Egypt. This loss of 19 aircraft translates into an attrition rate of just under 4 percent. (29:8) Air University Middle East expert, Dr. Lewis Ware, summed up the first day's air war well:

> The Israelis, therefore, caught most aircraft on the ground unattended. By judiciously selecting their targets--fighters first, then bombers, then radar, then SAMs--the Israelis eliminated all possibility of being challenged and set up the scenario for the unimpeded conquest of the Sinai peninsula by ground forces. (33:148-149)

The second day's air war went much like the first. By midnight on 6 June, Israel had destroyed 415 Arab aircraft, 393 of them on the ground, while losing only 26. Table 2 provides a breakdown of aircraft losses. In just two days, 5-6 June, estimated Arab Air Forces' losses exceeded 500 million dollars in aircraft with Egypt losing approximately 100 (almost one-third) of its most experienced pilots. It would take years to rebuild the EAF. (18:75)

EGYPT AND THE SINAI CAMPAIGN: 5-8 JUNE

During the last half of May, the two Egyptian divisions stationed in the desolate Sinai were reinforced with five more, bringing the total to 90,000 men equipped with close to 1,000 tanks. The Egyptian forces were deployed in a defensive-offensive array on three interlinked lines between

Israel and Egypt to permit absorbing an Israeli blow and swinging to the counteroffensive. (15:242) This deployment blocked all main lines of advance through the desert with massive troop concentrations and strongly fortified positions--some of which had been prepared over the last 20 years. (4:103)

Against these forces the Israelis marshalled three divisions, identified by the names of their commanders, Tal, Yoffe, and Sharon, and two brigades--a total of 45,000 men and 650 tanks. The three divisions were concentrated at three points on a 50-mile front facing the Egyptians. One of the brigades was deployed near the Gaza Strip and the other near Kuntilla on the southern axis. Thus, while the Egyptians dispersed their armor the Israelis concentrated theirs in a "mailed fist" directed at a narrow sector in a purely offensive strategy. (15:243)

General Rabin, the Israeli Chief of Staff, devised a bold plan with three phases: (1) to break through the Egyptian defenses at two of their strongest points; (2) an armored division to leap forward to the range of mountains just east of the Suez Canal, blocking the Egyptian escape routes; and (3) the final destruction of the trapped Egyptian forces. The task of breaking through Egyptian lines was given to General Tal (at Rafa) and General Sharon (at Abu Agheila). After these breakthroughs, General Yoffe's forces were to make the dash southwestward across the desert to Mitla and other mountain passes, thereby sealing all escape routes. (18:76-77) See Figure 2.

At 0815, 5 June, General Tal and the elite of the Israeli Armored Corps (300 tanks) began the attack near Rafa with the objective of seizing El Arish (30 miles to the west), the Egyptians' primary logistic base for

Sinai forces. Tal had made it clear to his men that since this was the first land battle, it had to be won--regardless of cost in casualties. Under extremely intense fire and without air support, the initial breakthrough came at Khan Yunis with heavy casualties including 35 tank commanders and a battalion commander. (4:108) Once in Khan Yunis, the Israelis smashed into Rafa, avoiding minefields by advancing swiftly in column on the Egyptians' internal roads. (18:78) By midnight Monday, Tal's thrust had reached El Arish and had overrun an enemy division, allowing a planned Israeli paratrooper assault of El Arish to be diverted to the Jordanian front. (4:111-112)

General Sharon's division made the second Israeli breakthrough in a brilliant night battle on 5 June at Abu Agheila. The enemy position was heavily fortified with several concrete parallel trenches three miles long, dense minefields, and strong armor and infantry flank support. Realizing the Egyptians dislike fighting at night and the Israelis excel at it, Sharon attacked at 2245, executing a complex, but effective plan. (18:78) The Israelis assaulted the strong point in a three-pronged attack: paratroopers silenced artillery positions from the rear; infantry and armor smashed frontline positions; and the northern perimeter was pounded with tanks and troops. (8:77) By 0600 Tuesday, 6 June, the Israeli army had achieved one of its greatest tactical successes--the overwhelming of Abu Agheila. (5:261)

With their breakthrough at Rafa and Abu Agheila, the Israelis were now behind the bulk of the Egyptian army and two gateways into the heart of the Sinai were open to them. Tal's forces advanced along the coastal and northerly route through Bir Gifgafa to block a possible Egyptian escape

route through the hills to Ismailia. Yoffe's forces crossing heavy sand dunes and meeting light resistance raced on a parallel, but more southerly, route to seal Mitla Pass. Sharon's forces linking with an independent brigade advancing from Kuntilla drove the Egyptians into the trap. (18:79) Further to the south at Sharm el-Sheikh, the Egyptians abandoned the promontory dominating the Straits of Tiran shortly before the Israeli naval and paratrooper assault force arrived on Wednesday morning, 7 June. (2:130) Figure 2 depicts these major Israeli advances.

By 1800 Wednesday, Yoffe's lead armor unit had reached Mitla (less than 60 hours after leaving Israel), and later that same evening Tal's forces were blocking the road to Ismailia. For the next 30 hours, the scene became a "valley of death." Deprived of much of its leadership, a continuous stream of Egyptian troops, vehicles, and armor rushed in full flight from central and eastern Sinai towards Mitla Pass without knowing that it had been sealed off by the IAF and Yoffe's forces. As the Egyptians converged from all directions, the IAF strafed and bombed them continuously with rockets, napalm, and high explosives. Yoffe's forces completed the slaughter. Further north, Tal's armor was having similar success with IAF assistance. (4:165-175) General Moulton, a British author, described the scene well:

> Thursday was a day of desperate attempts to break out and disastrous losses of Egyptian armor and transport. A column of burnt-out or abandoned tanks and vehicles, four or five miles long three or four abreast, was later reported in the Mitla Pass. (11:6)

With the remnants of seven Egyptian divisions stranded in the desert behind them, Tal and Yoffe began their last advance westward to the Suez Canal. By 0200 Friday morning, 9 June, Yoffe's forces had reached the

canal opposite Sbalufa and at Ras Sudr. (4:175) Some hours earlier on 8 June, Tal's lead column reached the east bank opposite Ismailia. (8:79) At 0435, 9 June (2135 on 8 June in New York), Egypt's representative to the UN unconditionally accepted a cease-fire. (8:279) The Sinai Campaign was over.

In four days the Israelis had decisively defeated Egypt's proud army of 90,000 men. For three of those four days (Tuesday, Wednesday, and Thursday), the IAF, with total air supremacy, roved the desert skies at will, cooperating in the land battle where necessary, but always seeking out and destroying enemy forces wherever they found them. (6:37) Thousands of vehicles, including over 700 tanks, were lost in the desert. President Nasser later confirmed that 80 percent of Egypt's military equipment committed in the Sinai had been lost. Their losses in personnel were equally high--nearly 12,000 men. The Israeli victory was much less expensive--less than 300 men killed and only 61 tanks destroyed. (15:246) See Table 3 for a summary of both Arab and Israeli losses.

JORDAN AND THE WEST BANK CAMPAIGN: 5-7 JUNE

On the eve of war, the Jordanians had concentrated at least 9 of its 11 brigades (approximately 45,000 men) on the West Bank. (15:247) These forces were deployed in two defensive sectors: a northern defensive region in Samaria, based on the cities of Jenin and Nablus; and a Judean region, extending south from Ramallah along the Judean hills through Jerusalem to Hebron. (5:282) See Figure 3. This distribution of forces as of 5 June indicated a defensive deployment, but the outlines of an offensive deployment were developing. The emphasis was to hold firm the nodal sectors around Jerusalem and Jenin, defending the rest of the front more lightly. (15:247)

On the Israeli side of the Jordanian frontier, General Narkiss, commanding Israel's Central Command, had mobilized six brigades for a completely defensive mission--protection of Israel's territory. After Dayan's appointment as Minister of Defense (just before the war), he reaffirmed the necessity for maintaining this defensive posture to avoid a multi-front war. (5:284) Jordan's actual entry into the war drew an Israeli paratrooper brigade destined for El Arish on the Egyptian front and caused three other brigades, two of them armored, to be diverted from the Syrian front to the north. Thus, the total number of forces on the Israeli-Jordanian front was relatively evenly matched--approximately 45,000 soldiers on each side. (15:247-248)

By 0900, 5 June, King Hussein had been informed of Israel's attack on Egypt; and General Riadh, the new Egyptian Commander of all Jordanian forces, had been ordered by Cairo to open a second front against Israel on the Jordanian frontier. (5:285) At about the same time, sporadic firing broke out along the Jerusalem perimeter from the Jordanian side, and soon afterwards shells began falling on the Israeli side of the city. By 1130 there was firing all along the border with shells from the Jordanian 155mm Long Tom guns falling on Tel Aviv and the area around the Israeli airfield at Ramat David to the north. (4:128) Shortly before noon, General Narkiss was ordered to open an offensive in the Jerusalem area. (5:287) The second front was about to open.

The Israeli offensive against Jordan had two planned phases: secure three initial objectives before fighting ceased and in the second phase, time permitting, take advantage of those objectives. The three minimum objectives of phase one were (1) to push the border south in the Jenin

region so as to protect the airfield and Jezreel Valley settlements from Jordan's artillery, (2) to secure and widen the Jerusalem-Tel Aviv corridor by cutting off the Latrun salient, and (3) to secure a link with the Mount Scopus enclave separated from Israel since 1948. Successfully achieving these phase one objectives would enhance Israeli chances of completing the second phase--capturing the entire West Bank and destroying or routing the Jordanian army. As in the Sinai, actual operations went according to plan, except that the Israelis encountered stiffer resistance and relied more on the IAF to prevail. The principal battles occurred in the vicinity of Jenin and around the Jerusalem area. (15:248)

In the Jerusalem sector two Israeli brigades began from Latrun and fought uphill in a northeasterly sweep between Ramallah and Jerusalem to cut the northern and eastern approaches to the city. Concurrently, a third brigade, starting from the southern outskirts, attacked eastward, seizing the hills to the south and cutting off Jordanian forces in the Bethlehem-Hebron area. These attacks, supported by armor, artillery, and the IAF, were successful. A paratrooper brigade performed the most difficult mission of assaulting the Jordanian positions north of the old walled city and breaking through them to link up with the forces which had encircled the city. Fighting hand to hand, house to house, mostly at night and without armor, artillery, or air support, the paratroopers advanced slowly in the most bitterly contested action of the war. After linkup with elements on the city periphery, the Israeli forces captured the old city from the east with little resistance. (15:250) By mid-morning, 7 June, the Israelis had captured the ancient Jewish capital of Jerusalem.

Israeli penetration on the northern frontier began at mid-afternoon on 5 June after several hours of IAF bombarding Jordanian positions in Samaria. The Jordanian defense in this area was tenacious and skillful. (5:308-309) However, by daylight on 6 June, movement became impossible as the IAF wiped out Jordanian convoys and repeatedly attacked their static positions. Israeli armored columns penetrated deeply behind Jordanian defenses, and by the night of 6 June, the collapse had begun. (6:33) By 0930 on 7 June, Israeli forces had reached the Damia bridge on the Jordan River. That afternoon organized resistance dwindled as Arab mayors collaborated with Israeli commanders, and the Hebron region fell with hardly a vestige of a struggle. (13:218-219) Figure 3 depicts the overall West Bank Campaign.

Fighting halted as Israeli and Jordanian commanders accepted a UN call for a cease-fire at 2000 on 7 June. (8:88) In less than three days the Israelis had captured Jerusalem, the city of David, Hebron, the city of Abraham, and all of the Holy Land--the entire West Bank. Overall Israeli and Jordanian casualties for this campaign were remarkably even and are broken out in Table 4.

SYRIA AND THE GOLAN HEIGHTS CAMPAIGN: 9-10 JUNE

Between 1948 and 1967, the Syrians had converted the Golan Heights into a large, fortified camp complete with gun emplacements, bunkers, dug-in tanks, connecting trenches, etc. These fortifications were concentrated along the western edge of the heights overlooking the Huleh Valley and the Sea of Galilee 1,500 feet below. Along this 70 kilometer Golan Plateau, the Syrians had deployed about eight brigades (40,000 soldiers) by early June with a concentration in the north centered around Quneitra. See Figure 4. From their well-protected positions, the Syrians could launch

more than 10 tons of shells per minute from the 265 guns placed along and just behind the ridge line. (5:317-318) The Israelis, commanded by General Elazar, countered with 20,000 troops (which swelled to 30,000 by the cease-fire) and about 250 tanks, almost as many as the Syrians had. (13:236)

During the war's initial four days (5-8 June), the Syrian front was the least active of the three combat fronts. Other than three Syrian company-size reconnaissance patrols conducted inside Israel on 6 June, the primary activity was heavy artillery shelling of Israeli forces in the valley below. During this time the Israelis remained in a defensive deployment, under intense artillery fire, awaiting the outcome on the Egyptian and Jordanian fronts. On Thursday, 8 June, the IAF turned its attention to the Syrian gun emplacements—antiaircraft first, artillery next. This "softening-up" continued until General Elazar began his assault, crossing the Syrian border at 1130 on 9 June. (4:180-185)

General Elazar's objective was to capture the Golan Heights. His plan was to break through Syrian defenses in the northern sector onto the Banias-Quneitra road. Once that opening was obtained, Israeli armor could pour through it on the diagonal road, smash into the enemy's rear, and facilitate new openings by threatening reinforcement and retreat lines. (15:253) The primary thrust was undertaken near Tel Fahar with several secondary penetrations to occur further south. See Figure 4.

The attack began at one of the steepest points on the escarpment with two brigades advancing behind eight bulldozers (preparing the way) under intense enemy fire. While the IAF provided heavy close air support, one brigade took over five hours to reach its objective, the road, three miles away. The other brigade, advancing slightly to the north, fought to widen

the penetration corridor and took seven hours to overcome thirteen positions, the principal of which was Tel Fahar. With the principal assault broken through in the north, some smaller breeches of the Syrian line were made further south in preparation for assaults by larger forces arriving from the other fronts. Early on 10 June, fresh troops began pouring through the holes opened the day before and with massive air support began pressing simultaneously from all directions. In hopes of triggering Soviet intervention, the Syrians made a false announcement at 0845 on 10 June over Radio Damascus that the Israeli troops had captured Quneitra. The Syrian soldiers interpreted this announcement to mean that the Israelis would soon close their escape routes. As a result, the Arabs began to abandon their positions and flee eastward. (15:253-255) This massive retreat continued for the rest of the day.

Offensive Israeli activity stopped at approximately 1430, and when the cease-fire became effective at 1830 on 10 June, the Israelis had captured the entire southwestern corner of Syria including all of the strategically important Golan Heights. (13:256-257) In less than two days, the Syrian army had suffered a costly defeat. A comparison of Syrian and Israeli losses are shown in Table 5.

AFTERMATH

In just six days (0745 on 5 June to 1830 on 10 June), Israel had overrun and captured approximately 26,000 square miles of Arab territory in an offensive war on three separate fronts. (7:172) See Figure 5. She had convincingly defeated numerically superior Arab forces (see Table 6) with exceptionally small losses. The Israelis began with a well planned surprise attack, and the Arabs never recovered. (28:25) Israel's war objectives were

attained--the Straits of Tiran and the Gulf were open to navigation; the terrorists' raids were silenced; and the homeland had been preserved against the Egypt-Jordan-Syria threat. Richard Humble summed up the Six Day War very accurately and succinctly when he wrote, "Never have so many been beaten by so few, in so little time." (7:166) Nonetheless, the unforgettable victory began to create as many problems for Israel as it had temporarily solved. In just over six years, Israel would once again be locked in combat with the Arabs in the War of Yom Kippur. (7:172)

TABLE 1 (29:9)

ISRAELI AIR FOR E LOSSES AGAINST EGYPT ON 5 JUNE 1967

Aircraft	Cause
2	Air-to-air
13	AAA
0	SAM
1	Flew into the ground
2	Own ordnance or target explosion
1	Unknown
19 TOTAL	

TABLE 2 (18:75)

AIRCRAFT LOST ON 5-6 JUNE 1967

EGYPT:	Fighters	
	MIG-21	95
	MIG-19	20
	MIG-15/17	82
	SU-7	10
	Bombers	
	IL-28	27
	TU-16	30
	Transports	
	IL-14	24
	AN-12	8
	MI 4 Helo	1
	MI 6 Helo	8
	Other Helo	4
	TOTAL	309
SYRIA:	Fighters	
	MIG-21	32
	MIG-15/17	23
	Bombers	
	IL-28	2
	Transports	
	MI 4 Helo	3
	TOTAL	60
JORDAN:	Fighters	
	Hunters	21
	Transports	5
	Helicopters	2
	TOTAL	28
IRAQ:	Fighters	
	MIG-21	9
	Hunters	7
	Bombers	
	TU-16	1
	TOTAL	17
LEBANON:	Fighters	
	Hunter	1
	TOTAL	1
GRAND ARAB TOTAL LOSSES		415
ISRAEL TOTAL LOSSES		26

TABLE 3 (15:246; 5:279)

EGYPTIAN/ISRAELI LOSSES IN THE SINAI CAMPAIGN

EGYPT:	
Officers killed	1,500
Troops killed	10,000+
Soldiers wounded	20,000+
Taken prisoner by Israelis	6,000
(Note: More than 12,000 men were allowed to make their own way back to Egypt rather than being taken prisoner.)	
Tanks destroyed	600
Tanks abandoned and captured intact by Israel	100+
Trucks and other vehicles destroyed	10,000
Guns destroyed or abandoned:	
Russian-made field guns	400
Self-propelled guns	50
155mm guns	30
ISRAEL:	
Soldiers killed	300
Soldiers wounded	1,000
Tanks destroyed	61

TABLE 4 (5:315)

JORDANIAN/ISRAELI CASUALTIES IN THE WEST BANK CAMPAIGN

JORDAN:	
Killed in action	696
Wounded in action	421
Missing in action	2,000+
(Note: Most of these were West Bank inhabitants who simply went home after defeat.)	
ISRAEL:	
Killed in action	550
Wounded in action	2,400

TABLE 5 (4:180; 13:257; 5:326)

*SYRIAN/ISRAELI LOSSES IN THE GOLAN HEIGHTS CAMPAIGN

SYRIA:	
Killed in action	1,000
Wounded in action	2,000+
Prisoners captured/missing	560
Tanks destroyed	33
Tanks captured intact	40
100mm self-propelled guns lost	13
Other artillery destroyed/captured	130+
ISRAEL:	
Killed in action	127
Wounded in action	625
Tanks knocked out	160
(Note: All but 30 were repaired)	

*Figures varied somewhat among the sources.

TABLE 6 (28:7)

APPROXIMATE FORCE STRENGTHS, SIX DAY WAR, 1967

Available	Israel	Total Arabs	Egypt	Jordan	Syria	Iraq
Mobilized Manpower	210,000	309,000	200,000	46,000	63,000	--
Tanks	1,000	2,337	1,300	287	750	--
APC	1,500	1,845	1,050	210	585	--
Artillery Pieces	203	962	575	72	315	--
SAMs	50	160	160	0	0	--
AA Guns	550	2,050+	950	?	1,100	--
Combat Aircraft	286	682	431	18	127	106

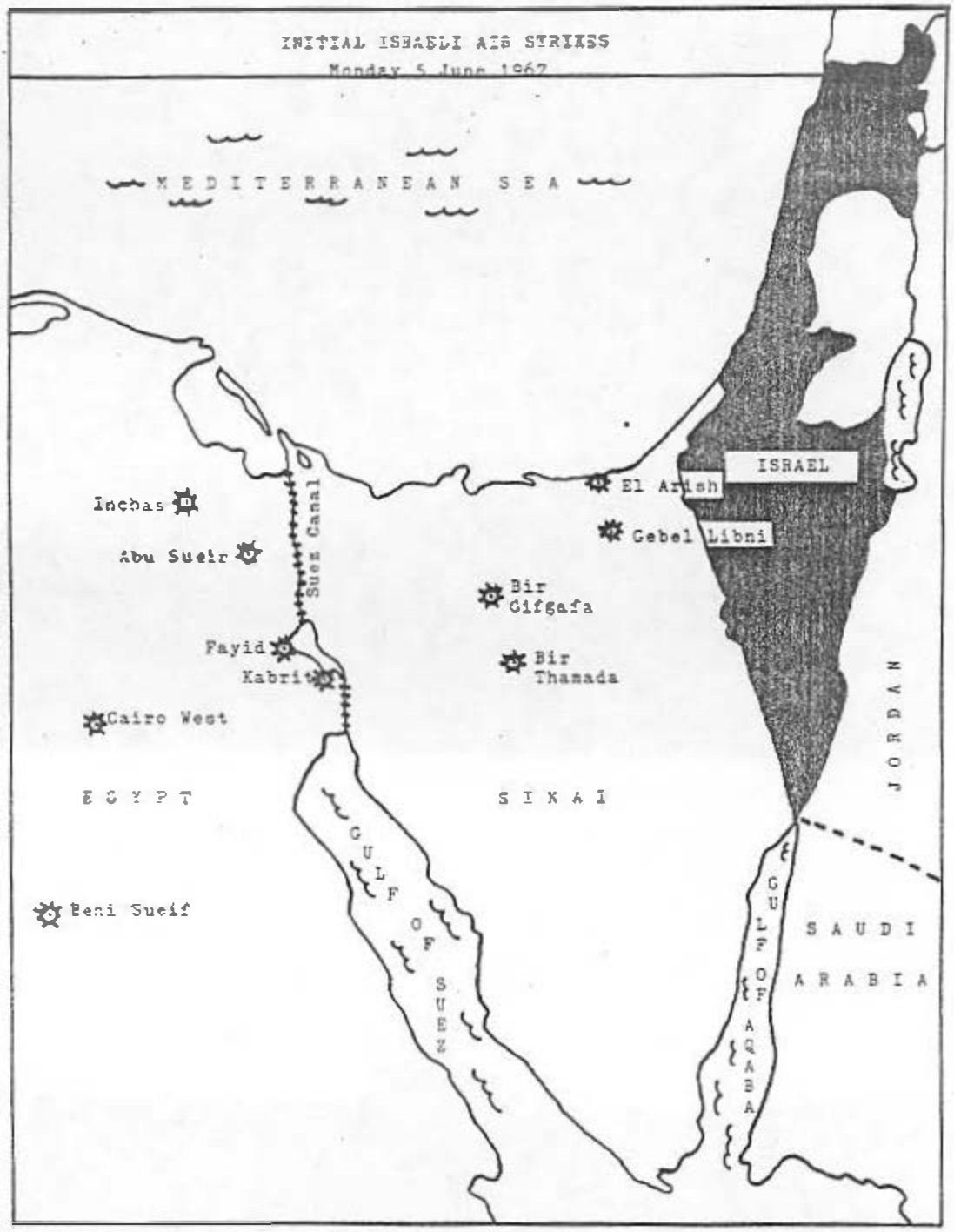
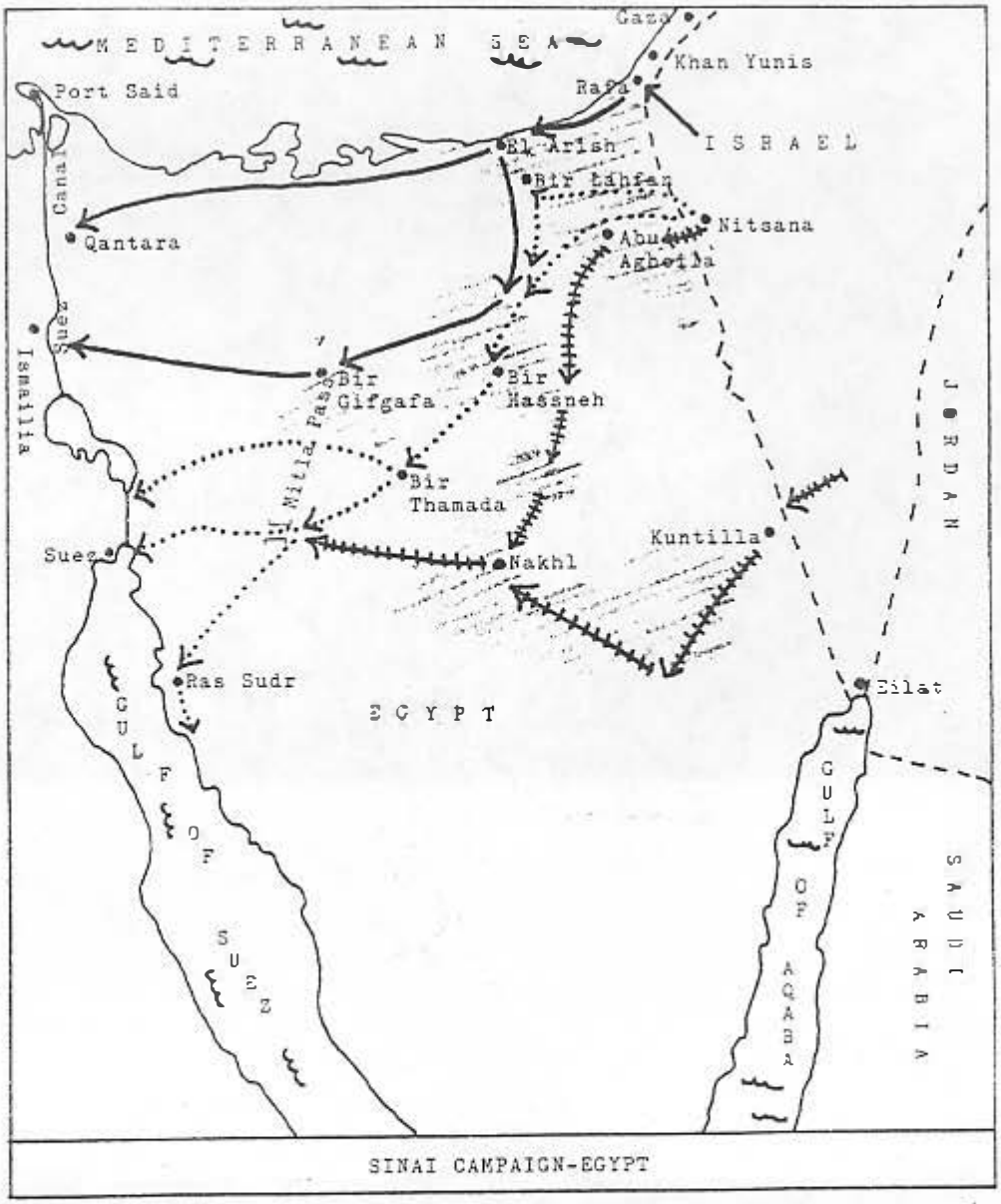

INITIAL ISRAELI AIR STRIKES
Monday 5 June 1967
MEDITERRANEAN SEA
ISRAEL
El Arish
Gebel Libni
Inchas
Abu Sueir
Suez Canal
Bir Gifgafa
Fayid
Kabrit
Bir Thamada
Cairo West
EGYPT
SINAI
JORDAN
GULF OF SUEZ
GULF OF AQABA
SAUDI ARABIA
Beni Sueif

Figure 1
(4:83)

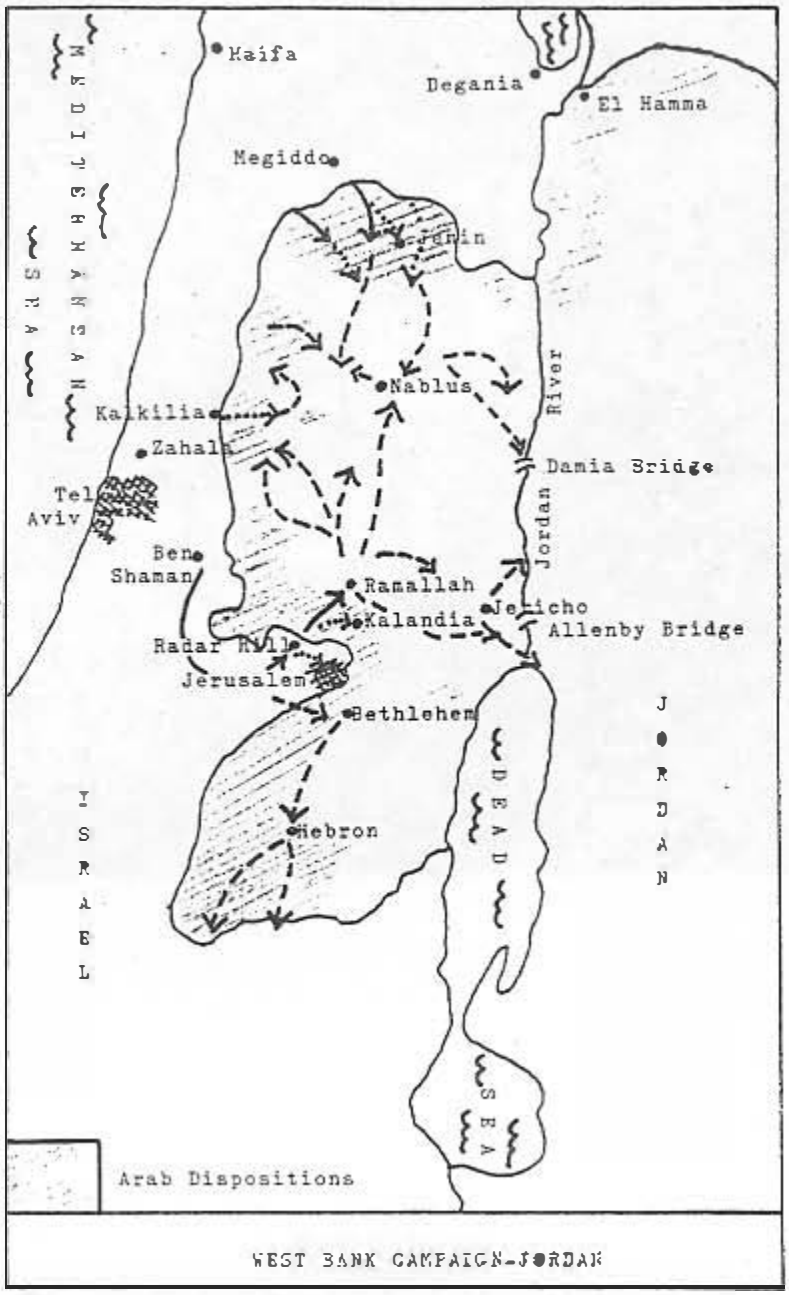


SINAI CAMPAIGN-EGYPT

TEL ..... YOFFE SHARON

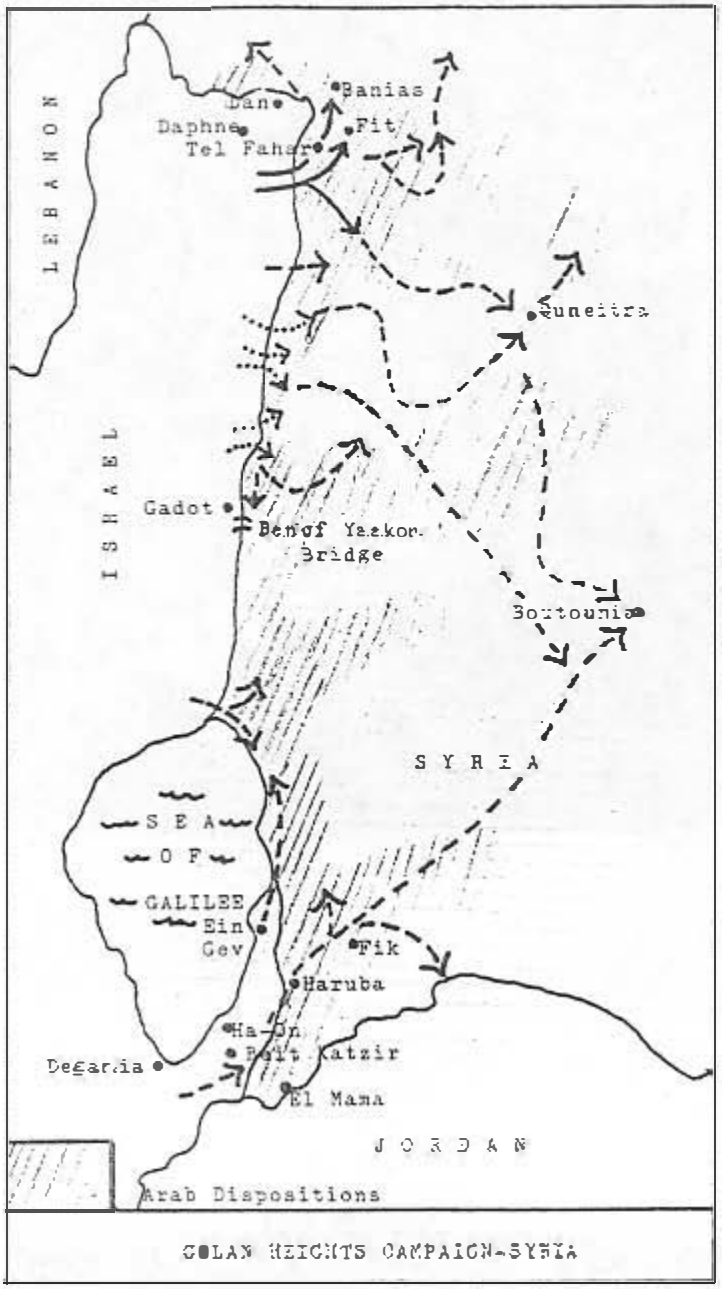
Arab Dispositions

Figure 2
(4:102)



JUNE 5 JUNE 6 JUNE 7

Figure 3
(p.32)



June 9 Major Breakthrough

June 9 Secondary Advance

June 10

Figure 4
(9:118)

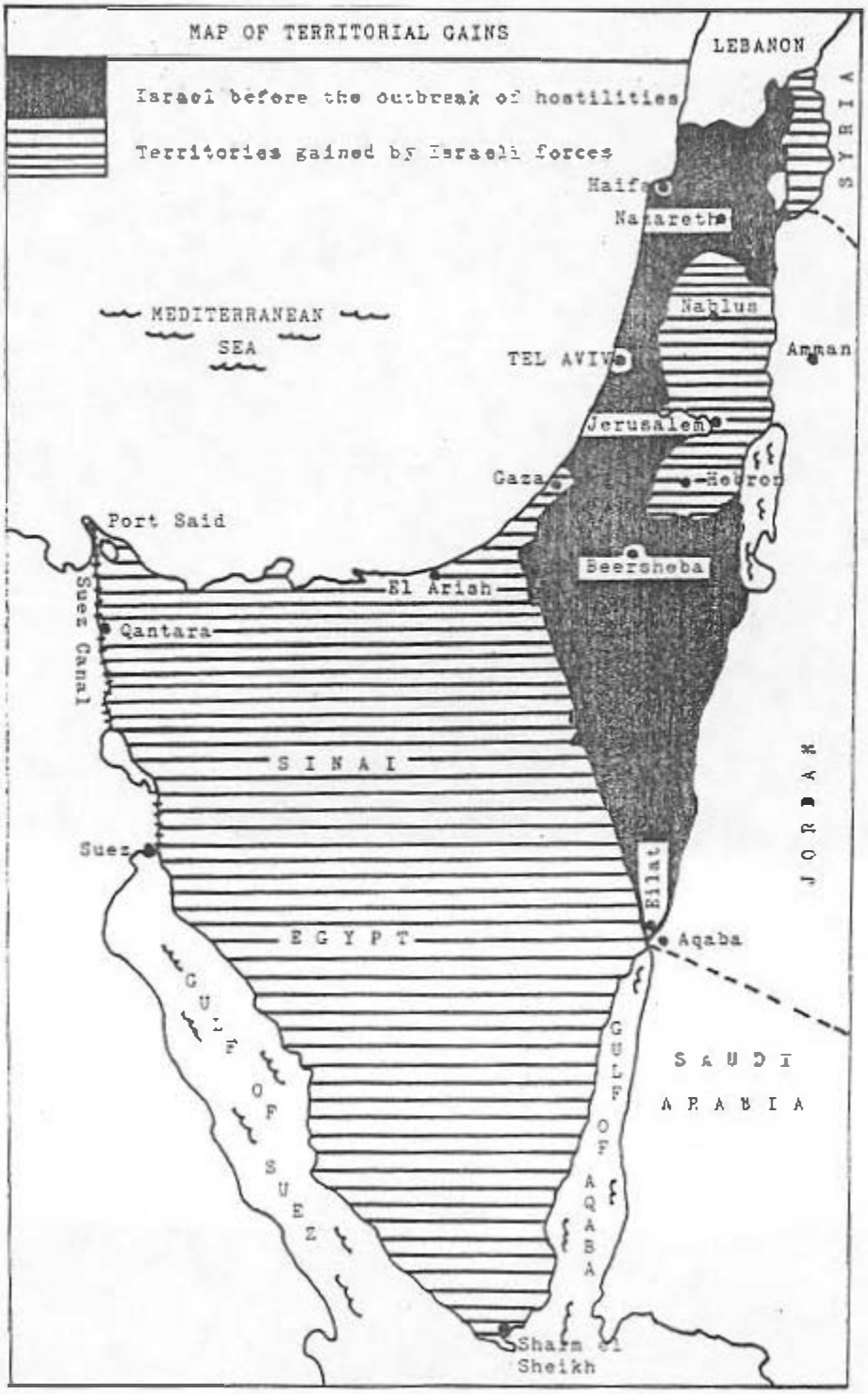


Figure 5 (6:215)

Chapter Two

THE PRINCIPLES OF WAR

The Six Day War provides military students an excellent case study for analyzing the principles of war. This chapter will review each of the principles of war listed in Air Force Manual (AFM) 1-1, and it will show how those principles were applied (or misapplied) by both sides during this conflict. The format for this analysis will be a short description of each principle followed by an Israeli example and then an Arab example of the apllication of that principle.

> All of the principles of war are interrelated and interacting elements of warfare. They are not separate and distinct entities from which a commander selectively chooses and applies to employing forces. Put in perspective, the principles of war help provide a better understanding of warfare, but they are not a series of checklist items that necessarily lead to victory. The principles of war are an important element of the art and science of warfare, but the understanding and mastery of this art requires a depth of knowledge far beyond mere principles. (32:2-4)

It is hoped that, by comparing principles designed for use in today's environment with operations undertaken in 1967, these principles will be reaffirmed in their validity during that short, but classical conflict.

OBJECTIVE

> *The most basic principle for success in any military operation is a clear and concise statement of a realistic OBJECTIVE. The objective defines what the military action intends to accomplish and normally describes the nature and scope of an operation. An objective may vary from the overall objective of a broad military operation to the detailed objective of a specific attack. . . . For aerospace operations, the air commander develops his*

broad strategy based on the primary objective, mindful of the capabilities of friendly forces (both man and machine), the capabilities and actions of the enemy, the environment, and sound military doctrine. Broad strategies derived from this combination of factors form the basis for selecting targets, means of attack, tactics of employment, and the phasing and timing of aerospace attacks. (32:2-4 - 2-5)

Israeli

Israel's overall objective in this war was to insure the survival of the nation itself. The Israelis realized "that while defeat for the Arabs would mean the loss of an army, for Israel it would mean the end of her existence as a state and the annihilation of her people." (4:66) This "survival" objective was further refined into two primary national military objectives and a third implied political objective. The opening of the Straits of Tiran (thereby gaining access from the Gulf of Aqaba to the Red Sea) and defeating or driving off the large Arab armies recently concentrated along her borders were the two main military objectives. The implied political objective, assuming victory, was for Israel to be recognized by the Arabs as a legitimate nation which would remain in Palestine forever.

More specific objectives were set in order to defeat the Arab forces and re-open the Straits. Probably the most important was to immediately gain complete air superiority by destroying the Egyptian Air Force (EAF) first (since it posed the most serious threat) and then dealing with the other Arab air forces next (if it became necessary). (29:2) The destruction of the EAF also required specific, well understood objectives which were skillfully attained in priority sequence--rendering runways unusable, destroying MIG-21s, eliminating the long-range bomber threat, etc. Other important military objectives were to fight an offensive war outside Israeli borders and to fight on only one major front at a time beginning

with the most threatening, Egypt. Certainly, the Israelis established realistic objectives which were clearly defined and well understood, and they followed these objectives in developing strategy, tactics, targets, etc. This positive application of the "objective principle" contributed immensely to Israel's overall success in this conflict.

Arab

The overall Arab objective in this war was voiced by Nasser and Radio Cairo many times in the weeks immediately preceding actual combat--the annihilation of Israel and the liberation of Palestine. (10:17) Indeed, Nasser seemed to use this theme as much for Pan-Arab unity (with him as its official voice/leader) as for a national objective of Egypt. (33:145-146) Nonetheless, the Arabs were less successful in refining their overall objective into more specific, "do-able" objectives which would in turn lead to the primary objective. This condition was undoubtedly compounded by the mostly informal ties (military, economic, and political) between Egypt, Jordan, and Syria. Some Egyptian documents captured by Israeli forces during the Sinai Campaign did reveal a specific Egyptian military objective of severing the southern Negev and seizing the port of Eliat, thereby completing the military blockade of the Gulf of Aqaba. (10:16 and 19) This objective was never accomplished since the offensive necessary for its attainment was never launched.

OFFENSIVE

Unless OFFENSIVE action is initiated, military victory is seldom possible. The principle of offensive is to act rather than react. The offensive enables commanders to select priorities of attack, as well as time, place, and weaponry necessary to achieve objectives. Aerospace forces possess a capability to seize the offensive and can be employed rapidly and directly

against enemy targets. Aerospace forces have the power to penetrate to the heart of an enemy's strength without first defeating defending forces in detail. Therefore, to take full advantage of the capabilities of aerospace power, it is imperative that air commanders seize the offensive at the very outset of hostilities. (32:2-5)

Israeli

Israel's methodology for fighting the entire war could probably best be described by the word "offensive." Her opening move in the war, a preemptive air strike on the major Egyptian airfields, is a classic example of offensive use of air power. Israel had recognized since the late 1950s the need for an offensive air force. One of the IAF's former commanding generals, Ezer Weizman, had insisted that "Israel's best defense is in the skies of Cairo." (23:34) The opening offensive air strikes allowed Israeli air commanders to select the priorities of attack (runways, MIG-21s, and TU-16s first), to select the time (0745, 5 June), place (10 major Egyptian airfields), and weaponry (concrete dibber bombs) to achieve their initial objective of destroying the EAF.

Similarly, the Israelis also successfully applied the principle of "offensive" in the land war. The Sinai Campaign began with two offensive thrusts to break through Egyptian defenses at Rafa and Abu Agheila. After achieving breakthrough, the action remained offensive continuing the momentum--not to take the enemy's positions, but to throw him off balance and make his positions untenable. (4:105) In slight contrast, Israel intentionally did not take offensive land actions against Syria during the first four days of the war. However, when the outcome of the Egyptian and Jordanian fronts was no longer in doubt, Israel launched her campaign for the Golan Heights with two major offensive thrusts near Tel Fahar and

several other smaller ones further south. Seizing the offense and maintaining that momentum were key ingredients in Israel's quick victory.

Arab

The Arabs were generally guilty of negative applications of this principle even when circumstances presented opportunities for positive application. For example, there were no sorties launched from any of the nine Egyptian airfields which were not struck in the original Israeli air raid at 0745. Even though these airfields contained interceptor aircraft, they remained "passive" until being struck 90 minutes later at 0915. (13:68) Syria provides another example of the Arabs' failure to initiate offensive actions when opportunities arose. During the war's first several days Syrian ground forces did not make any serious advances (three reconnaissance patrols being the exception) against Israel even though Israeli forces were actively and heavily involved on two other fronts. Instead, the Syrians were content to remain firmly entrenched in their defensive positions along the Golan Heights and wait upon events to develop while only shelling Israeli positions. Thus, the initiative was surrendered to Israel. (12:247)

SURPRISE

> *SURPRISE is the attack of an enemy at a time, place, and manner for which the enemy is neither prepared nor expecting an attack. The principle of surprise is achieved when an enemy is unable to react effectively to an attack. Surprise is achieved through security, deception, audacity, originality, and timely execution. Surprise can decisively shift the balance of power. Surprise gives attacking forces the advantage of seizing the initiative while forcing the enemy to react. . . . Surprise is a most powerful influence in aerospace operations, and commanders must make every effort to attain it.* (32:2-5)

Israeli

Again, the IAF's opening air raids provide outstanding examples of the positive application of surprise. In fact, the degree of surprise the Israelis achieved over the Egyptians at 0745, Monday the 5th of June, rivals that which the Japanese raid on Pearl Harbor achieved over the Americans on 7 December 1941. The 0745 time-on-target had special significance which capitalized on surprise--the daily peak EAF alert period when dawn patrols were airborne would be over, the Nile's morning mist would be lifted, and senior commanders would be enroute to work. (13:63)

Deception, boldness, originality, and timely execution all contributed to the Israelis achieving a high degree of surprise. The deception of sending some of the Israeli army on "false leave" the weekend before the Monday attacks showed originality and worked. Some feints to the south by Israeli aircraft several days before hostilities began also caused the Egyptians to send some aircraft and ships away from the Suez Canal area before the attack. (17:1631) Additionally, Israeli air commanders displayed audacity and originality to surprise the Egyptians by attacking Luxor and Ras Banas airfields, the two most distant bases from Israeli airspace and thought to be reasonably safe from Israeli attack. Using aging twin-engine Vantours, Israeli pilots climbed to approximately 25,000 feet, cut one engine to conserve fuel until making glide descents over target, and then returned to full-power attacks. (21:57)

The surprise achieved on the morning of 5 June was instrumental in shifting the balance of power to Israel. The destruction of the EAF in just 170 minutes gave Israel immediate air superiority (one of her important objectives) which she capitalized on for the remainder of the war and which

directly contributed to her ground victories in the Sinai, on the West Bank, and along the Golan Heights.

Arab

The Arabs sacrificed the principle of surprise for the principle of mass. During the last half of May, the Arabs, primarily under Nasser's informal leadership, took many overt actions which not only negated surprising Israel with an attack but alerted her to the point of fearing for her future existence. Some of these overt acts included massing of Egyptian troops in the Sinai, the movement of Iraqi forces into Jordan, creating a United Egyptian-Jordanian Command, placing Palestine Liberation Organization troops under the military commands of Egypt and Syria, and calling for a holy war to destroy Israel and liberate Palestine over the radio in Cairo and Damascus. (30:10-11)

Additionally, the Egyptians were surprised by the initial Israeli air strike partly because of their own Arab bureaucracy. The powerful Jordanian radar station at Ajlun detected the Israeli fighters at 0738 (seven minutes before the initial wave attacked) and sent a warning message to Egypt. However, the message was delayed from reaching the EAF because a recent directive by the Egyptian War Minister required such messages to be routed through his office enroute to the EAF. (14:23)

SECURITY

SECURITY protects friendly military operations from enemy activities which could hamper or defeat aerospace forces. . . . Security involves active and passive defensive measures and the denial of useful information to an enemy. . . . Security in aerospace operations is achieved through a combination of factors such as secrecy, disguise, operational security, deception, dispersal, maneuver, timing, posturing, and the defense and hardening of forces. Security is enhanced by establishing

an effective command, control, communications, and intelligence network. (32:2-5)

Israeli

The Israelis positively applied the security principle in several instances before and during the war. The security surrounding the Israeli air raid which opened the war was enviable as evidenced by the fact that Jewish citizens residing adjacent to the main base at Tel Aviv were unaware that many of the combat aircraft had launched in the shadow of their homes to attack Egypt. (31:44) Additionally, good security had prevented the outside world from learning of Israel's development and production of the sophisticated "concrete dibber" bomb which measurably enhanced the destruction of Arab runways. (6:30)

An excellent intelligence network also contributed significantly to effective Israeli security and overall success. Israeli intelligence provided their pilots extensive, detailed, and accurate information regarding Arab military posture including exact locations of each Egyptian squadron and exact parking positions of aircraft and in some cases decoys. (27:45) Israeli intelligence also provided needed details on enemy radar and missile sites as well as useful information about the Arabs such as personal habits, idiosyncrasies, etc. (18:81)

Arab

Unlike the Isrealis, Arab application of the security principle left much room for improvement. In fact, a major Arab security compromise occurred 10 months before the war started which greatly aided Israel--an Iraqi pilot defected to Israel with his MIG-21 making it the first aircraft of this type to reach the western world. As a result, IAF pilots began to

immediately explore its combat strengths and weaknesses through practice dogfights with various IAF fighters. (23:34) Arab security lapses also occurred during actual combat. Throughout the afternoon and evening of 5 June, Israeli intelligence monitored Egyptian transmissions from General Amer, Commanding General of Egyptian forces, to his various division commanders regarding the dispatch of reinforcements to Abu Agheila. (5:267) Early the next morning, the Israelis also monitored a telephone conversation between President Nasser (Egypt) and King Hussein (Jordan) regarding the IAF's deadly air strikes on 5 June. (4:90)

MASS AND ECONOMY OF FORCE

> *Success in achieving objectives with aerospace power requires a proper balance between the principles of MASS and ECONOMY OF FORCE. Concentrated firepower can overwhelm enemy defenses and secure an objective at the right time and place. Because of their characteristics and capabilities, aerospace forces possess the ability to concentrate enormous decisive striking power upon selected targets when and where it is needed most. . . . Concurrently, using economy of force permits a commander to execute attacks with appropriate mass at the critical time and place without wasting resources on secondary objectives.* (32:2-6)

Israeli

The Israelis understood and applied these principles from the opening moments of the war. To achieve their objective of immediate air superiority, the Israelis massed their air strike capabilities against the 10 most important counter air targets of the EAF, striking all of them simultaneously. For almost three hours the Israelis concentrated the entire IAF's firepower upon the EAF. This massing effort was counterbalanced with a frugal economy of force. Only 12 aircraft (8 airborne and 4 on runway alert) were left behind to guard Israel and the home bases. (4:82) At

midday, the IAF's concentrated firepower was then turned to the other Arab air forces where it was needed most. Similarly, on the morning of 9 June with Egypt and Jordan beaten, the IAF's firepower was massed against the firmly entrenched Syrians on the Golan Heights as a prelude to the land offensive which began at 1130. (5:320)

The Israelis used these principles as skillfully on the ground as they did in the air. Israeli armor and infantry were massed into a "mailed fist" to break through Egyptian defenses at two points in the Sinai--Rafa and Abu Agheila. Equally effective, when Jordan opened the second front on 5 June, three Israeli brigades were diverted from the Syrian front in the north to the Jordanian front. (15:247) This diversion of forces properly balanced the need for mass against the second front (Jordan) with the economy of force requirements necessary to defend against Syria.

Arab

One of the most damaging violations of these principles during the war was made by the Syrians on the morning of 9 June. As Israeli forces began their advance across the open country below the Golan Heights, the main weight of the Syrian artillery fire continued to fall on Israeli settlements in the middle distance as it had since dawn. Only a small proportion of Syrian fire was directed against the Israeli advance. One author described this situation,

> . . . as fortunate for the Israelis, as had the whole of the Syrian artillery been concentrated on them at this juncture they would have suffered a great many casualties, and perhaps some units would have been so badly knocked about that they would not have been able to continue the advance as they did. (13:247)

Syrian artillery fire was also improperly concentrated during the first several days of the war in violation of these principles. After four days of intense shelling by Syrian artillery, Israeli losses were extraordinarily light: 205 houses, 9 chicken coops, 2 tractor sheds, 3 clubs, 1 dining hall, 6 barns, 30 tractors, 15 motor cars, 2 killed, 16 wounded, 75 acres of grain burnt, and 175 acres of fruit orchards destroyed. (4:187) During this time, the Israelis intercepted a radio message in Russian saying, "The black ones [sheep] are running away." (4:187)

MANEUVER

War is a complex interaction of moves and countermoves. MANEUVER is the movement of friendly forces in relation to enemy forces. Commanders seek to maneuver their strengths selectively against an enemy's weakness while avoiding engagements with forces of superior strength. Effective use of maneuver can maintain the initiative, dictate the terms of engagement, retain security, and position forces at the right time and place to execute surprise attacks. Maneuver permits rapid massing of combat power and effective disengagement of forces. (32:2-6)

Israeli

The Israelis demonstrated positive application of the maneuver principle on several occasions. First, in the Sinai desert, General Yoffe's forces crossed sand dunes which the Egyptians thought were impassable (therefore they met little resistance) and raced across the desert to block Mitla Pass and seal the Egyptians in a trap. Upon reaching the pass, lead Israeli forces set up an ambush position just east of the pass and completely surprised the Egyptian units which unknowingly followed the Israelis into the trap. This ambush, assisted by IAF close air support, successfully jammed Mitla Pass and resulted in heavy Egyptian equipment losses. (5:273)

Another effective maneuver of forces occurred against Syria. As the Israelis launched the offensive to capture the Golan Heights, forces were maneuvered so that the primary Israeli thrust was mounted on the steepest and most difficult terrain in the northern Syrian defensive belt instead of on the less difficult, but better defended, terrain further south. These southerly positions were later taken from the rear after the successful northern penetration. (13:237)

Arab

The Egyptians failed to maneuver in the Sinai after the initial Israeli breakthrough at Rafa even though plans existed for just such an eventuality. The plan, Kahir, was based on the assumption that an Israeli penetration into the Sinai would be successful, and it called for an offensive counter. There was none forthcoming. General Amer ignored suggestions by his subordinates at General Headquarters to send the messages necessary to initiate such actions by his field commanders. It has been suggested that he was either drunk or stoned on drugs in reaction to the successful Israeli air strikes earlier that day. (5:266-267) Colonel Dupuy, a noted military author, described the Egyptian failure to maneuver on 5 June:

> The forces in the Sinai, who had never received any comprehensive instructions for either offense or defense, sat motionless in their positions until attacked, as the Israelis picked them off one by one. (5:265)

TIMING AND TEMPO

TIMING AND TEMPO is the principle of executing military operations at a point in time and at a rate which optimizes the use of friendly forces and which inhibits or denies the effectiveness of enemy forces. The purpose is to dominate the action, to remain unpredictable, and to create uncertainty in the mind of the enemy. . . . Controlling the action may require a mix of surprise, security, mass, and maneuver to take advantage of

emerging and fleeting opportunities. Consequently, attacks against an enemy must be executed at a time, frequency, and intensity that will do the most to achieve objectives. (32:2-6)

Israeli

The opening Israeli air strikes on Egypt provide one of the war's best examples of excellent timing and tempo. Forty aircraft took off from a number of different bases throughout Israel at different times in order for all of them to be over their targets (10 Egyptian airfields) at exactly 0745. Furthermore, this excellent timing continued as the first attack wave departed its targets only minutes before the arrival of the second attack wave. This furious tempo was maintained for 80 minutes with a new attack wave arriving every 10 minutes, right on the tails of the departing attack wave. After a 10-minute lull, another 80-minute bout began. (5:265) This incredible timing resulted in complete Israeli domination over the Egyptians in the war's opening hours.

Arab

The Arabs victimized themselves at least twice because of poor timing--once in the Sinai and again in Syria. On the morning of 6 June after suffering Israeli penetrations at Rafa and Abu Agheila, General Amer sent messages to each of his division and independent unit commanders to withdraw. He took this action without consulting his staff. After a short time, three of his senior staff officers convinced him that withdrawal was a mistake so he sent out new messages to stop it. However, it was too late--the damage had been done, and Egyptian units were disintegrating. (5:268)

The Syrian incident was similar to the one in Egypt. After the Israelis had broken through Syrian defenses at several places on 9 June, Radio Damascus made a false announcement at 0845 on 10 June that the Israelis had captured Quneitra (Israeli forces were still six hours away) in hopes of triggering Soviet intervention. The announcement backfired as Syrian troops throughout the Golan interpreted it to mean support from the rear was impossible and that the Israelis would soon close all escape routes. At once, the Syrians began to abandon their positions and a massive retreat began. (15:255) The Israelis countered with an accelerated advance.

UNITY OF COMMAND

UNITY OF COMMAND is the principle of vesting appropriate authority and responsibility in a single commander to effect unity of effort in carrying out an assigned task. Unity of command provides for the effective exercise of leadership and power of decision over assigned forces for the purpose of achieving a common objective. Unity of command obtains unity of effort by the coordinated action of all forces toward a common goal. . . . The air commander, as the central authority for the air effort, develops strategies and plans, determines priorities, allocates resources, and controls assigned aerospace forces to achieve the primary objective. (32:2-6 - 2-7)

Israeli

The Israelis applied this principle from the highest levels of command downwards. Israeli forces were divided into three separate commands under the Chief of Staff, General Yitzhak Rabin: the Southern Command (against Egypt), the Central Command (against Jordan), and the Northern Command (against Syria). Each of these area commanders had a different role as the war began. The Southern Commander, General Gavish, was to advance his forces across the Sinai as rapidly as possible while the other two commanders were to remain in a defensive posture until the Sinai was won. As

conditions changed (e.g., Jordan opened a second front), General Rabin, seeing the "big picture," diverted forces from the Northern Command and from the Sinai to launch the West Bank offensive. General Elazar's Northern Command had to remain in a defensive posture for over four full days against Syria (longer than originally planned), but such a move was necessary to insure unity of effort toward the overall Israeli victory. This same unity of command principle was present at lower levels as well. General Gavich's forces were divided into three primary divisions under Generals Tal, Sharon, and Yoffe. Each division worked independently, but in harmony and close coordination, to take the Sinai in just four days.

Arab

Certainly the Arabs were aware of this principle and took some steps toward insuring its application. For instance, the Egyptians sent General Riadh to Amman on 1 June to assume command of all Jordanian armed forces. (13:34) Having an Egyptian commander over Jordanian forces (which were to be augmented by an Iraqi division) should help insure unity of effort since these forces would now fall under President Nasser and General Amer's control. This arrangement was at least partially successful since General Riadh responded to General Amer's order on the morning of 5 June to open a second front. However, the success of opening the second front was somewhat offset by King Hussein's initial reluctance and General Riadh's unfamiliarity with his new command. (5:285-286)

SIMPLICITY

To achieve a unity of effort toward a common goal, guidance must be quick, clear, and concise--it must have SIMPLICITY. Simplicity promotes understanding, reduces confusion, and permits ease of execution in the intense and uncertain environ-

ment of combat. Simplicity adds to the cohesion of a force by providing unambiguous guidance that fosters a clear understanding of expected actions. . . . Command structures, strategies, plans, tactics, and procedures must all be clear, simple, and unencumbered to permit ease of execution. [32:2-7]

Israeli

The Israelis provide both a good and bad example of this principle in the Sinai, yet both examples ended with objectives accomplished. The first example is the Rafa penetration in the Sinai to begin the land war on 5 June. Before this battle General Tal gave his men the following instructions:

> If we are going to win the war, we must win the first battle. The battle must be fought with no retreats, every objective must be taken--no matter the cost in casualties. We must succeed or die. (4:108)

In the second example, the battle at Abu Agheila, General Sharon's plan to overcome heavy fortifications was very complex (five separate phases) and had to be executed at night. He overcame this complexity with a cornerstone of simplicity--unambiguous guidance. He had a sand table made of the whole area and went over his plan with each of his officers so they knew exactly what had to be done and how. (4:118) Additionally, most of the commanders were already familiar with the Egyptian fortifications at Abu Agheila since an attack on it was a major exercise each year at the Israeli Command and Staff College. (5:258)

Arab

The Arabs' most serious violation of this principle occurred in the Sinai after the major Israeli breakthroughs. At this critical time, General Amer needed to give his commanders clear, concise guidance to reduce confusion and provide a clear understanding of expected actions.

Instead, he made the situation worse by confusing his commanders. At first (after the opening air strikes and the Rafa penetration), he provided no guidance at all. Then, he turned from inaction to feverish activity sending messages directly to division commanders bypassing both the front commander and the field army commander. Next, he gave the totally unexpected and unexplained order to withdraw on the morning of 6 June. Within a few hours, this message was countermanded by another Amer order to stop the withdrawal. (5:267-268) The fog of war surrounding the Egyptians had become very thick, very quickly. Indeed, the Israelis contributed to this fog over the next several days as they broadcast false messages over captured radio sets to confuse or mislead Egyptian commanders. (13:171)

LOGISTICS

> *LOGISTICS is the principle of sustaining both man and machine in combat. Logistics is the principle of obtaining, moving, and maintaining warfighting potential. Success in warfare depends on getting sufficient men and machines in the right position at the right time. This requires a simple, secure, and flexible logistics system to be an integral part of an air operation. . . . To reduce the stresses imposed by potentially critical logistics decisions, commanders must establish a simple and secure logistic system in peacetime that can reduce the burden of constant attention in wartime. Effective logistics also requires a flexible system that can function in all combat environments and that can respond to abrupt and sudden change.* (32:2-7)

Israeli

The Israelis clearly understood the logistics principle and applied it to their advantage. One of the most striking examples of outstanding results from Israeli logistics is the seven and one-half minute ground turn-around time (refueling and rearming) during the air offensive. For flights to Egyptian targets near the Suez Canal the mission profile is shown below:

Time to target:	22½ minutes
Time spent over target:	7½ minutes
Return to base:	20 minutes
Ground turn-around time:	7½ minutes
TOTAL	57½ minutes

Such effort permitted Israeli aircraft to be back over their targets within an hour of the previous strike. (4:82) This logistical force multiplier resulted in Nasser saying, ". . . the enemy is operating an air force three times its normal strength." (21:60) In fact, some captured Egyptian documents later revealed an estimate of two Israeli sorties per day per aircraft when in actuality seven and eight sorties per aircraft were not uncommon on 5 June. (24:1637) Additionally, the IAF's logistical success was demonstrated by starting the war with a 99 percent aircraft serviceability level, maintaining a serviceability level above 90 percent throughout the war (even while flying over 1,000 sorties the first two days), and not having to abort a single strike mission once the aircraft was airborne for the entire war. (21:60; 19:259)

Arab

The Egyptians exemplify how Arab forces did not keep pace with the Israelis logistically. When the war began, Egypt had an acute shortage of pilots (approximately one per aircraft) because force expansion had outpaced training. Also, the Egyptian ground crews, using Soviet techniques, were averaging ground turn-around times of two hours (16 times slower than the Israelis) and had acquired only an 80 percent aircraft serviceability level by the beginning of the war. (13:59-60) Undoubtedly, the hot, dry climate of Egypt added to these unserviceability levels since the aircraft

were designed to operate in the sub-zero temperatures of Russia; however, effective logistics requires a system that can function in all combat environments.

COHESION

> *COHESION is the principle of establishing and maintaining the warfighting spirit and capability of a force to win. Cohesion is the cement that holds a unit together through the trials of combat and is critical to the fighting effectiveness of a force. Throughout military experience, cohesive forces have generally achieved victory, while disjointed efforts have usually met defeat. . . . Commanders build cohesion through effective leadership and generating a sense of common identity and shared purpose. Leaders maintain cohesion by communicating objectives clearly, demonstrating genuine concern for the morale and welfare of their people, and employing men and machines according to the dictates of sound military doctrine.* {32:2-8}

Israeli

The Israelis practice the principle of cohesion as well as armed forces anywhere in the world. Even before the war began, Israeli forces demonstrated cohesion and a sense of common purpose. During mobilization for the war, some units found themselves with a 20 percent surplus in manpower because many over-age or otherwise slightly unqualified men reported for duty anyway and were accepted without much question. Furthermore, the regional organization pattern for Israeli units built in cohesion and provided additional incentive in battle. Such incentive was exemplified in the Northern Command when Israelis fighting the Syrians were avenging their own frequently shelled villages. (25:57)

One of the best examples of Israeli cohesion was displayed immediately following the bitterly contested battle for Jerusalem. Within moments of capturing the "old city" on the morning of 7 June, General Goren, Chief Chaplain of Israeli forces, appeared at the western wall of the old temple

(Wailing Wall), blew a ram's horn (an old Jewish custom), and cried in excitement:

> These moments will be inscribed in the annals of our people for generations to come! Zahal [Israeli army] has raised the flag of Israel's sovereignty over the Temple Mount, site of the nation's glory. The Wall is ours! We shall never give it up! (2:100)

Within several minutes he was joined in a worship service at the wall by General Rabin, the Chief of Staff, General Barlev, the Assistant Chief of Staff, General Narkiss, Chief of Central Command, and many of the soldiers who had helped win the old city. (2:101) This emotional event uniquely illustrates the Israelis' deep sense of common identity and shared purpose.

Finally, several authors agree that one of the most important contributions to Israel's victory was that each soldier clearly understood what he was fighting for--the future existence of Israel. (4:66; 13:276; 18:81; 25:57) This shared, common understanding was undoubtedly an important and inseparable facet of cohesion throughout Israeli units.

Arab

In the days immediately preceding the war's outbreak, the Arabs demonstrated a degree of cohesion; however, it was short-lived. President Nasser's attempt to unite the Arabs against their common enemy (Israel) in a holy war began to disintegrate as the fighting grew more intense. In this situation the Egyptians provide numerous examples of a breakdown in cohesion--primarily due to poor officership. For instance, after the initial Israeli victories on the first day, many senior commanders passed on the withdrawal order of 6 June without any instructions. They abandoned their troops, and ordered their chauffeurs to drive west to the canal. (5:268) A similar example is shown when General Sharon tells of finding an Egyptian soldier

by the roadside crying, "They left me, they left me." (4:69) This breakdown in cohesion spread quickly. By Friday morning, 9 June, hardly an Egyptian unit was intact as tens of thousands of Egyptian soldiers, for the most part abandoned by their officers, had thrown away arms, equipment, and boots and were hopelessly wandering westward across the desert towards Egypt. (6:37)

FINAL THOUGHT

The examples chosen for this chapter's principles of war analysis were selected primarily for their clarity. Obviously, this paper provided more examples of positive applications of the principles of war by the Israelis than by the Arabs. However, in view of the decisive victory won by the Israelis in just six days and based upon my research, I believe these examples present an unbiased representation of what actually happened.

Chapter Three

GUIDED DISCUSSION

The first chapter of this paper provided a synopsis of the Six Day War. The second chapter listed the official Air Force definition of all twelve principles of war and described at least one example of the application (positive or negative) of those principles. This final chapter will provide some potential questions, with supporting rationale, which could be used to "kick off" a discussion of the principles of war as they were applied in the Arab-Israeli conflict of 1967. These questions are designed to be a starting point--to initiate discussion and break inertia. Clearly, they are not all inclusive, and any discussion leader should feel free to modify or substitute the questions based on a personal interpretation of the first two chapters, additional readings, or other related information. Finally, to enhance the discussion, it would be helpful if the discussion leader provided a list of the principles of war to each participant.

1. Lead-off Question

What were Israel's master objectives for fighting the Six Day War?

Discussion

Israel's stated objective for this war was to insure the survival of Israel as a nation-state which she felt was openly threatened by the numerically superior military forces and highly antagonistic Arab states. To insure her continued existence, Israel adopted two primary, national military

objectives for the actual war: (1) to open the Straits of Tiran which were of critical economic importance and (2) to either defeat or drive off the large Arab armies which were massed on her borders. The universal understanding and acceptance of the master "survival" objective by the Israeli soldier also significantly enhanced the cohesion of Israeli forces.

a. Follow-up Question

What were some specific military objectives that Israel employed to accomplish the master objectives?

Discussion

One of the most critical military objectives was to gain immediate and complete air superiority over the Arab air forces. The successful achievement of this objective significantly contributed to the attainment of other military objectives and ultimately the overall Israeli victory. Another specific military objective was to fight an offensive war on enemy territory instead of being dragged into a war of attrition on Israeli soil. The Israelis were less successful, however, in attaining another specific objective--fighting on only one front at a time. When Jordan attacked at midday on 5 June, Israel responded with an offensive on this second front. The objective was not abandoned, only modified, as evidenced by the fact Israel still maintained a defensive posture against Syria until the fighting on two fronts (Egypt and Jordan) was successfully resolved.

2. Lead-off Question

Which principles of war were clearly demonstrated by the pre-emptive air strike against Egyptian airfields on the morning of 5 June?

Discussion

The objective of this strike was to gain complete air superiority. The surprise achieved in catching most Arab aircraft on the ground contributed to the attainment of that objective. Much of the surprise achieved was a direct result of positive applications by the Israelis of the security principle. Effective command and control, accurate and meaningful intelligence, posturing, and secrecy were important elements of Israeli security. Mass and economy of effort were balanced to put the maximum number of aircraft in an offensive role while retaining only twelve aircraft to guard against Arab attacks. The timing and tempo achieved in the opening air raids was superb, with all Israeli aircraft in the first attack wave arriving at ten different Egyptian bases at precisely 0745. This excellent timing continued with each ensuing attack wave arriving every ten minutes which resulted in an exceptionally high tempo favoring the Israelis. Lastly, sound application of the logistics principle was evident in the seven and one-half minute ground turn-around times for the IAF in the first hours of the war.

a. Follow-up Question

Which principles did the Arab air forces use (or misuse) in their opening air raids on Israeli targets?

Discussion

The Jordanian air strikes at Natania and Kefer Sirkin air base on 5 June applied the principle of mass using 16 of 22 available aircraft. In contrast, the Syrians violated the mass principle using only 12 aircraft (less than 10 percent of those available) to attack the Israeli oil refinery at Haifa and the base at Megiddo. Although some surprise was achieved,

neither the Jordanian nor Syrian raids were very successful. The Arab air forces operated at an extremely low tempo in their raids on Israel. Essentially, the Israeli targets were only hit once. These raids appeared to be more of a "show of force" than an attempt to win a meaningful objective.

3. Lead-off Question

Identify several (two or three) principles of war the Egyptians violated or ignored during the Sinai Campaign.

Discussion

When the Israelis first broke through Egyptian defenses at Rafa on 5 June, the Egyptian forces failed to maneuver and launch the counteroffensive their own plans dictated. General Amer's failure to apply the simplicity principle by giving his subordinate commanders contradictory orders certainly added to the Arabs' problems in the Sinai. Additionally, the cohesion of Egyptian forces evaporated quickly as many Egyptian officers abandoned their troops on the second day of the fighting. Lastly, it is possible to make a case that the Egyptians sacrificed the principle of surprise for the principle of mass in the days immediately before the war's outbreak when they overtly expelled the UNEF and moved in large force concentrations along Israel's southern border.

a. Follow-up Question

Which principles of war did the Israelis use extremely effectively in the Sinai desert?

Discussion

The Israelis launched the Sinai Campaign with two offensive thrusts against Egyptian strongholds. The combination of mass (three attacking armored divisions), maneuver (the end run by Yoffe's division to seal the Mitla

Pass), offensive (always moving forward), and accelerated tempo kept the Egyptians off balance from the time the first attacks were launched against Rafa until the Israelis were washing their feet in the Suez Canal less than five days later.

4. Lead-off Question

The fight for control over the Golan Heights did not begin until the fifth day of this six day war. Were the Syrians guilty of any major violations of the principles of war during this campaign?

Discussion

The Syrians were content to stay in their fortified positions atop the Golan escarpment during the war's first four days when it may have been to their advantage to launch an offensive against Israel while she was occupied in heavy fighting on two other fronts. However, once Israel began her offensive penetrations into the Golan, the Syrians were ineffective in massing their firepower against the advancing Israelis. Finally, poor timing by the Syrians, as evidenced by their premature statement over Radio Damascus announcing the fall of Quneitra, also contributed significantly to the quick Israeli occupation of the strategically important Golan Heights.

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APPENDICES

APPENDIX A - ISRAELI ORDER OF BATTLE

APPENDIX B - EGYPTIAN ORDER OF BATTLE

APPENDIX C - JORDANIAN ORDER OF BATTLE

APPENDIX D - SYRIAN ORDER OF BATTLE

APPENDIX A

ISRAELI ORDER OF BATTLE (5:338)

Minister of Defense	(Gen) Moshe Dayan
Chief of Staff	Lt Gen Yitzhak Rabin
Southern Command	BG Yeshayahu Gavish
Armored Division	BG Israel Tal
Armored Brigade (7th)	Col Shmuel Gonen
Armored Brigade	Col Menachem Aviram
Paratroop Brigade	Col Rafael Eitan
Recon Task Force (Armored Regt)	Col Uri Baron
("Granit" Task Force)	Col Granit Yisrael
Armored Division	BG Avraham Yoffe
Armored Brigade	Col Isska Shadni
Armored Brigade	Col Elhanan Sela
Armored Division	BG Ariel Sharon
Armored Brigade	Col Mordechai Zippori
Infantry Brigade	Col Kutty Adam
Paratroop Brigade*	Col Danny Matt
Ind. Armored Brigade	Col Albert Mendler**
Ind. Infantry Brigade	Col Yehuda Reshef (Gaza area)
Ind. Paratroop Task Force	Col Aharon Davidi (Sharm el Sheikh area)
Central Command	BG Usi Narkiss
Infantry Brigade (Jerusalem,Etzioni)	Col Eliezer Amitai
Paratroop Brigade*	Col Mordechai Cur
Mechanized Brigade (Harel)	Col Uri Ben-Ari
Infantry Brigade	Col Ze'ev Shehem (Kalkylia)
Infantry Brigade	Col Moshe Yotvat (Latrun)
Northern Command	BG David Elazar
Jordan--	
Armored Division	BG Elad Peled**
Infantry Brigade*	Col Aharon Avnon
Armored Brigade*	LTC Moshe Bar Kochva
Armored Brigade*	Col Uri Rom
Ind. Infantry Brigade*	Col Yehuda Gavish (Beit Shean)
Syria--	
Composite Division	BG Dan Laner
Armored Brigade	Col Albert Mendler
Infantry Brigade (Golani)	Col Yona Efrat
Infantry Brigade	Col Emmanuel Shehed

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* Unit diverted north to Syria.

** Commander and headquarters transferred north to Syria.

APPENDIX 8

EGYPTIAN ORDER OF BATTLE (5:339)

Commander in Chief and 1st Deputy President	F.M. Mohammed Abd el Hakim Amer
Chief of Staff Armed Forces	Lt. Gen.Anwhar al Khadi
Front Commander in Chief	Gen. Abd el Mohsen Mortagui
Front Chief of Staff	Maj. Gen. Ahmed Ismail Ali
Field Army Commander	Lt. Gen. Salah el din Mohsen
2nd Infantry Division	Maj. Gen. Sadi Naguib
3rd Infantry Division	Maj. Gen. Osman Nasser
4th Armored Division	Maj. Gen. Sidki el Ghoul
Armored Task Force	Maj. Gen. Saad el Shazli
6th Mechanized Division	Maj. Gen. Abd el Kader Hassan
1st Armored Brigade	Brig. Hussein abd el Nataf
125th Armored Brigade	Brig. Ahmed El-Naby
7th Infantry Division	Maj. Gen. Abd el Aziz Soliman
20th PLA Division (Gaza)	Maj. Gen. Mohommed Abd el Moneim Hasni
Independent Infantry Brigade (Sharm el Sheikh)	Brig. Mohommed abd el Moneim Khalil
Air Force	Gen. Mohammed Sidki Mahmoud
Navy	Admiral Soliman Ezzat
Commander in Chief, United Arab Command	Gen. Ali Amer

APPENDIX C

JORDANIAN ORDER OF BATTLE (5:339)

Allied Commander of the Jordanian Front	Gen. Abdul Moneim Riadh (Egyptian)
Commander in Chief	Field Marshal Habis el Majali
Deputy Commander in Chief	Gen. Sherif Nasir ben Jamil
Chief of Staff	Maj. Gen. Amer Khammash
Commanding General, West Front	Maj. Gen. Mohammed Ahmed Salim
Imam Ali Infantry Brigade	Brig. Ahmed Shihadeh
Hittin Infantry Brigade (Hebron)	Brig. Bahjet Muhaisin
25th (Khalid Ben El Walid) Infantry Brigade (Jenin)	
60th Armored Brigade (Jericho)	Lt. Col. Awad Mohammed El Khalidi
40th Armored Brigade (Damiya)	Brig. Sherif Zeid ben Shaker
27th (King Talal) Infantry Brigade (Jerusalem)	Brig. Ata Ali
Qadisiyeh Infantry Brigade (Valley Sector)	Brig. Qasim El Maayteh
Princess Alia Infantry Brigade (Nablus)	Brig. Turki Baarah
El Hashimi Infantry Brigade (Ramallah)	Col. Kamal El Taher
El Yarmouk Infantry Brigade (Northern Sector)	Col. Mufadi Abdul Musleh
Air Force	Gen. Saleh Kurdi

APPENDIX D

SYRIAN ORDER OF BATTLE (5:340)

Minister of Defense	Lt. Gen. Hafiz al Assad
Chief of Staff, Commanding General, Field Army	Maj. Gen. Ahmed Souedani
12th Group Brigade	Col. Ahmed Amix
11th Infantry Brigade	
132d Reserve Infantry Brigade	
89th Reserve Infantry Brigade	
44th Armored Brigade	
35th Group Brigade	Brig. Gen. Said Tayan
8th Infantry Brigade	
19th Infantry Brigade	
32d Infantry Brigade	
17th Mechanized Infantry Brigade	
42d Group Brigade	Brig. Gen. Abdul Razzak Dardari
14th Armored Brigade	
25th Infantry Brigade	
50th Reserve Infantry Brigade	
60th Reserve Infantry Brigade	
23d Infantry Brigade (Latakia)	
Air Force	Lt. Gen. Hafiz al Assad
Navy	Brig. Gen. Mustafa Shuman

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